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PATENT
Attorney Docket No.: JHU1160-3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	David Sidransky	Art Unit:	1634
Serial No.:	09/863,806	Examiner	S.W. Zitomer
Filed:	May 22, 2001		
Title:	DETECTION OF NEOPLASIA BY ANALYSIS OF SALIVA		

Commissioner for Patents
Washington, D.C. 20231

AMENDMENT IN RESPONSE TO THE OFFICE ACTION

Sir:

Responsive to the Office Action mailed March 27, 2002, entry of the amendments and new claims, and reconsideration of the application in view thereof and of the following remarks are respectfully requested.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on June 27, 2002, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231

Karen LePari

Karen LePari

Gray Cary\GT\6299982.1
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I. AMENDMENTS

Please enter the Substitute Specification submitted herewith.

Please amend claim 1 to read as follows:

a1

1. (Amended) A method for detecting cancer in a subject, the method comprising:

isolating nucleic acid from a saliva specimen taken from the subject,

amplifying the nucleic acid using oligonucleotides that hybridize to flanking regions of a target mutant nucleotide sequence in the nucleic acid, wherein the oligonucleotides are selected from those set forth as SEQ ID NOS:33 to 172, thereby generating an amplification product, and

detecting the target mutant nucleotide sequence in the amplification product, wherein the presence of the target mutant nucleotide sequence is indicative of cancer in the subject.

Please add the following new claims:

a2

--2. The method of claim 1, wherein the target mutant nucleotide sequence comprises a nucleotide sequence as set forth in SEQ ID NOS:1 to 32 and 173 to 178.

3. The method of claim 1, wherein an oligonucleotide that hybridizes to a flanking region of a target mutant nucleotide sequence comprises a detectable label, and wherein detecting the amplification product comprises detecting the detectable label.

4. The method of claim 3, wherein the detectable label is biotin, avidin, streptavidin, an enzymatic label, a fluorescent label, a chemiluminescent label, or a radionuclide label.

5. The method of claim 1, further comprising contacting the amplification product with an oligonucleotide probe that selectively hybridizes to a target mutant nucleotide sequence,

which comprises a nucleotide sequence as set forth in SEQ ID NOS:1 to 32 and 173 to 178, and detecting selective hybridization of the oligonucleotide probe to the target mutant nucleotide sequence.

a2 cont

6. The method of claim 5, wherein the oligonucleotide probe comprises a detectable label, and wherein detecting selective hybridization comprises detecting the detectable label.

7. The method of claim 6, wherein the detectable label is biotin, avidin, streptavidin, an enzymatic label, a fluorescent label, or a radionuclide label.

8. A method for detecting cancer in a subject, the method comprising:

contacting nucleic acid from a saliva specimen taken from the subject with an oligonucleotide probe that selectively hybridizes to a target mutant nucleotide sequence comprising a nucleotide sequence as set forth in SEQ ID NOS:1 to 32, and

detecting selective hybridization of the oligonucleotide probe to a target mutant nucleotide sequence in the nucleic acid, thereby detecting cancer in the subject.

9. The method of claim 8, wherein the oligonucleotide probe comprises a nucleotide sequence complementary to any one of SEQ ID NOS:1 to 32 and 173 to 178.

10. The method of claim 8, wherein the oligonucleotide probe comprises a detectable label, and wherein detecting selective hybridization comprises detecting the detectable label.

11. The method of claim 10, wherein the detectable label is biotin, avidin, streptavidin, an enzymatic label, a fluorescent label, or a radionuclide label.--

II. REMARKS

Upon entry of the amendment, claims 1 to 11 will be pending.

A marked version of claim 1 showing the amendment is attached hereto as Exhibit A. A marked version of the application as originally filed showing the amendments to the specification is attached hereto as Exhibit B.

A. Regarding the Amendments

A Substitute Specification has been submitted herewith. As compared to the application as originally filed, the Substitute Specification has been amended 1) to correct the Sequence Identifiers such that they correspond to the SEQ ID NOS: as set forth in the Sequence Listing; 2) to correct typographical errors at paragraph 32, last sentence ("epithelial"); paragraph 77, second sentence (delete second occurrence of "a"); paragraph 78 ("personnel"); paragraph 83 ("anesthetized"); and paragraph 86 ("centrifuge"); and 3) to substitute paragraph numbering for line numbering. As such, the Substitute Specification does not add new matter and, therefore, it is respectfully requested that the Substitute Specification be entered.

Claim 1 has been amended to more clearly set forth the steps required to perform a method of the invention, and to recite to specific oligonucleotides useful for practicing the method. Referring to the Substitute Specification, the amendments are supported, for example, at page 5, paragraph 15; page 12, paragraphs 33 and 34; and at paragraph 55, which spans pages 21 to 29. As such, the amendments to claim 1 are supported by the specification and, therefore, do not add new matter.

New claims 2 to 11 have been added. New claims 2 and 5 are supported, for example, at page 19, paragraph 52; and by paragraph 54, at pages 20-21. New claims 3, 4, 6 and7 are supported, for example, at page 30, paragraph 60, to page 32, paragraph 63; and at page 35, paragraph 75. New claims 8 and 9 are supported, for example, at page 19, paragraph 52; by

paragraph 54, pages 20-21; and at page 30, paragraph 57. New claims 10 and 11 are supported, for example, at page 30, paragraph 60, to page 32, paragraph 63; and at page 35, paragraph 75. As such, it is submitted that the newly added claims do not add new matter.

B. Prior Art Rejection

The rejection of claim 1 under 35 U.S.C. § 102(e) as allegedly anticipated by Sorenson (U.SS. Pat. No. 5,496,699) is respectfully traversed.

It is stated in the Office Action that the claims are anticipated because Sorenson describes detecting cancer by isolating nucleic acids from a saliva specimen and assaying the nucleic acid fro a genetic mutation indicative of cancer. The claims have been amended to recite specific oligonucleotide and/or target mutant nucleotide sequences. Sorenson does not teach or suggest a method of using or identifying such nucleotide sequences, as claimed, and, therefore, does not anticipate the claimed methods. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102(e) be removed.

C. Obviousness-type Double Patenting

The rejections of claim 1 under the judicially established doctrine of obviousness-type double patenting, as allegedly obvious over either of claim 1 of U.S. Pat. No. 5,725,019, claim 1 of U.S. Pat. No. 5,561,041, or claim 1 of U.S. Pat. No. 6,235,470, are respectfully traversed.

A Terminal Disclaimer, disclaiming any patent term that may extend beyond the term of U.S. Pat. No. 5,725,019, U.S. Pat. No. 5,561,041, and U.S. Pat. No. 6,235,470, has been submitted herewith. Accordingly, it is respectfully requested that the obviousness-type double patenting rejections be removed.

In view of the amendments and the above remarks, it is submitted that the claims are in condition for allowance, and a notice to that effect respectfully is requested. The Examiner is invited to contact Applicant's undersigned representative if there are any questions relating to this application.

No fee is deemed necessary in connection with the filing of this paper. However, if any fee is required, the Commissioner is hereby authorized to charge the amount of this fee, or credit any overpayments, to Deposit Account No. 50-1355. A copy of this Transmittal Sheet is enclosed.

Respectfully Submitted,

Date: June 27, 2002

Lisa A. Haile, Ph.D.
Reg. No. 38,347
Telephone: (858) 677-1456
Facsimile: (858) 677-1465

GRAY CARY WARE & FREIDENRICH LLP
4365 Executive Drive, Suite 1100
San Diego, California 92121-2133
USPTO Customer Number: 28213

Enclosures: Exhibits A and B